



CROSSTALK

News Bulletin of the TRW Amateur Radio Club

Member, American Radio Relay League

NOVEMBER 1985

** FD'71 ** FD'73 ** FD'75 ** FD'76 ** WAS ** WAC **

Garrett/W6TRW Repeater: 145.32/-600(2A-PL) -- UHF: 442.000in/447.000out

CALENDAR FOR NOVEMBER AND DECEMBER

Tuesday	Nov 26, noon	Club Meeting, R4/1041. Speaker will be Glenn Arakaki, KH6UR. Mr. Arakaki, a new member of the TRW/ARC, will present slides of operating from Christmas Island.
Thur, Fri	Nov 28, 29	Thanksgiving Holiday! Happy Turkey Day!!
Saturday	Nov 30, 8-11am	Swapmeet, Don't forget the new hours for sellers! Lot opens at 7:00am - no earlier! Corner of Aviation and Compton/Marine behind the Standard Station.
Tuesday	Dec 3, after work	Early Executive Board Meeting. All members are welcome! At Shakey's Manhattan Beach, 2000 N. Sepulveda Blvd., just south of Marine.
Wednesday	Dec 17, noon	Early Club Meeting R4/1041.
Thursday	Dec 28, 8-11am	Swapmeet

Tidbits from the Jolly Little S...

So begins that time of year when the old membership runs out and it must be renewed. The form that you will find on one of the pages of the Crosstalk will look a lot like last year's but it is not the same. We have added a question that attempts to find your area of interest so we may direct club activities to benefit the most of our members. If you don't feel that your answers to all of the "stock" questions have changed, ANSWER THEM ANYWAY!! I don't even remember what my answers were a year ago! Your answers determine whether or not your name goes on the list to that Staff member who organizes that activity. If you don't answer the questions we can only assume No answers. We have added a place to order a Club badge too, with a space for your name as you want it on the badge. So take a moment NOW, fill out the application, make out the check and mail it! In 5 minutes it will be behind you.

Bill Ivey, WA6QET, has been our representative to the Systems Employees Association (SEA) for many years. Bill has done an outstanding job relaying to the Executive Board the requirements of SEA on our Club and our requests to SEA for funding and other needs. Unfortunately, Bill has been given layoff notice effective after the first of the year. It is unknown at press time if Bill will be able to stay on at TRW or will find employment elsewhere, but we certainly hope that he will be able to stay on. Whatever you end up doing, we are certain that you will be successful Bill, and we want you to know we appreciate all you have done for the Club over the years. Bill is one of those regulars that show up at all of the Club functions that require a little extra effort and pitched in to make them a success. Bill's function with SEA will be taken over by Paul Herbert, KG6CR.

From the Library

George Lee, W6IOW

What's new in the November issues of:

- QST: The Loop Skywire (all band HF ant, costs nearly 0 great DX)
An inexpensive Spectrum Analyzer for the Amateur
A 902 MHz Loop Yagi
Product Review: TAPR, Heathkit and AEA TNCs.
- HR: High Stability Local Osc. for microwave Rcvr (phase locked approach)
High Dynamic Range on 2 Meters
External Product Detector Improves Rcvr performance in older radios
Build a handy RF Probe
- 73: Improve your audio report
Conjure an RF Genie (a 3-22MHz sig gen/ IF aligner)
Probe the Unknown (An Active RF Probe)
- CQ: Not received in time for press

The Library bought three new books lately for your reference.

1. The FCC Rule Book - 1985 Edition
2. ARRL Operating Manual - 1985 Edition
3. Small High Efficiency Antennas, Alias the Loop, By W5QJR (A 3' diameter loop for 10 to 20 Meters is about -6db from the gain of a triband beam!)

Of the 6 foreign radio magazines donated by N6NW, there were comprehensive reports on the: FT2700RH, FT270RH in the June Radio Amateur. TS-940 in the July Radio Amateur from Britain



The TRW/ARC Annual Banquet was held at Del Conte's Restaurant on Saturday November 16th. Fifty eight persons attended and were treated to their choice of Prime Rib or Baked Chicken dinners that included a salad and dessert. Also included in the evenings festivities was a presentation by Julian Macassey, N6ARE, Vice-President of Operations of AMSAT. Julian discussed satellites that are being built at the present time for future launches. Two of the satellites will be dedicated Packet "store and forward" types and one will still carry some voice capability. Julian stated that there will be a launch from the Shuttle in the future that will use Freon propellant that will simply be heated to create the required thrust to get the satellite in a higher orbit. Julian stated that the propulsion system developed by a TRW engineer was a real step backward in technology but necessary due to stringent Shuttle requirements to protect the astronauts. President Walt Pearson passed out Certificates of Appreciation to Executive Board and Staff Members for the efforts that they have put forth over the past two years. The door prizes included those that were for the hams and those for the YF's. All were \$25 gift certificates; to Conroy's, Robinsons and Bullocks for the ladies, and to Henry Radio, Jun's and C & A Roberts for the hams. Many thanks to C & A Roberts for donating a second \$25 gift certificate for the evening. Winners of the door prizes were; Francis Craig (mother of Connie Gilmore), Phyllis Gilmore and Lorna Salisbury (wife of Darwin Salisbury) winning the three ladies gift certificates; Norm Stockwell, Dale Jensen and Sandy Heyn (wife of ARRL SW Division Director Fried Heyn) winning the ham gift certificates; Don Resor, winning the donated gift certificate from C & A Roberts; Bill Ivey and guest speaker Julian Macassey winning donated ARRL Handbook and Antenna Book respectively. The Gilmore family were the real clean-up of the dinner as Connie Gilmore won the top prize of a Kenwood TR-2600A Handheld Transceiver. All three Gilmore (Craig) attendees were winners at the banquet.

Executive Board Meeting 12 Nov 1985**Paul Lukas, N6DMY**

President Walt Pearson opened the meeting. The minutes of the last Executive Board Meeting were accepted as printed in the Crosstalk. Jim Wike pointed out the the location of Del Conte's Restaurant is on the south side of the street, not the north side as previously printed in the Crosstalk. Treasurer Paul Herbert reported that of the 60 people attending the banquet, 58 have paid. He distributed a report showing the Club's financial status. He also pointed out the policy changes by SEA to handle Club funds. A discussion on the budget spending followed. The completion of the Club station tower was named as a priority project. Emergency Communications Coordinator Dale Jensen, along with Walt Pearson will set up a meeting with Security outlining the role Amateur Radio would play in case of an emergency. Jim Wike reported that the income from the sale of door prize tickets at the last general meeting was nearly twice that of previous meetings. It was decided to continue with the offering of a cash prize or gift certificate in addition the the smaller prizes as was done at the last meeting. Bob Hume is installing relays for the 40 Meter Quad antenna to control the east/west direction and phone/CW tuning of the antenna. Bill Daley gave a full report on the last LAACARC meeting. Highlights of the LAACARC meeting included 5 new clubs being represented, the QSL Bureau for September and October received 36,000 cards and 3600 SASEs and mailed out 2200. Archie Willis the Bureau manager is looking for someone to fill a vacancy in his staff, 2400 Scouts passed through the Commemorative ham station set up at the Camporee which included HF, CW and Packet operations, and the LAACARC is

losing their meeting place at the DWP Building in Downtown LA and is looking for another. The next LAACARC meeting will be January 7, 1986. Bill Dews reported that the Club has 170 members. Discussion was held on the appearance of the Membership Form for 1986. Some changes from the 1985 form were suggested and will be incorporated. Eleven persons attended the meeting which was adjourned at 1914 local time.

NEW MEMBERS - - OLD MEMBERS

Welcome to the Club:

Don E. Houghton, WA6VHC, an associate member holding a General Class license and has been a ham for 10 years.

The Digital Front**Chris Wachs, WA2KDL**

There is a lot of news this month. The Pakratt is here. It is otherwise known as the PK-64 from AEA. Just plug the Pakratt into the Commodore 64 or Commodore 128 and you are ready to go! The Pakratt will run Packet VHF and HF, AMTOR, Baudot, ASCII and Morse with the HF Modem. What more can you ask for?

The Tucson Amateur Packet Radio organization is out of the TNC kit business. No need to worry, however, as once again AEA will offer it's version of the TNC-2 as the PK-80. It should be available before the holidays. The TNC-2 is good for those who do not have a Commodore computer but do have a computer with an RS-232C serial port. The TNC-1 is also good for this application. If you are interested in building a TNC-2 or are interested in saving money, the kit offered by GLB Electronics may be for you. That is one of the least expensive ways to become involved in Packet. Speaking of kits, Heathkit is offering their version of the TNC-1 for around \$250.

Once again, the TNC-1 uses a 6809 CPU and has a parallel port with status and command channel and diagnostic signal port. The TNC-1 provides for an external modem and requires 120 VAC. The AEA PK-1 runs on 12 VDC. The TNC-2 uses a Z80 CPU and does not have a parallel port. It runs on 12 VDC and is smaller than the TNC-1 designs. Over all, the TNC-1 and TNC-2 give the same results; only the package is different. The TNC-1 has more frills which are reflected in the cost.

The next "Ham in Space" is set for March, 1986. He will fly with a TNC connected to a Radio Shack Model 100 portable computer. Finally a chance for Packeteers to work a ham in space.

Once again, the voice Packet Net is on 145.140 (-.600) at 8:00pm on Mondays. The Los Angeles Packet meeting is after the TRW Swapmeet starting at 11:00am at the Dana School Cafeteria. The Dana School is on Aviation Boulevard near 135th Street on the East side of the street. This is north of the TRW Swapmeet site by about one half mile.

Join the ARRL -- Help the Club

This appeal is directed to those who are not members of the ARRL or those who were members but your membership expired prior to 1980. If you join the ARRL now (within the next 60 days) and put the four digit code 1658 on your application, \$5 of your \$25 dues will go directly to the TRW/ARC. This will double the amount the Club gets from your membership (full member dues are \$5 also). You don't get anything less from the ARRL and don't put out any more from your pocket than a regular ARRL membership would cost, but you help the TRW/ARC in a big way. So don't sit down and write that check right now. There is a membership form on page 190 of the November QST. Just be sure you put the four digit code 1658 on the application! It works, I know - I did it and saw the check at the last EBM. Hurry, time is running out, the end of the year is the deadline!

The Silent Key

We were saddened to learn this week of the sudden and unexpected death of one of our most active members, Someone Else.

Let us reflect upon this very sobering news. Someone Else's passing creates a vacancy that will be difficult to fill. Someone Else has been with us for many years and for every one of those years, Someone Else did far more than a normal persons share of the work.

Whenever leadership was mentioned, "Someone Else can work with that group", was the reply that was heard. "Let Someone Else do it", others chimed in.

It was common knowledge that Someone Else was always your first volunteer for a net control operator. Whenever there was a need for a net controller's break, everyone assumed that Someone Else would have the check-ins copied and take control.

Someone Else was a wonderful person, sometimes appearing to be superhuman, but a person can only do so much. Were the truth known, everybody expected too much of Someone Else.

Now Someone Else has become a silent key. We can no longer depend on Someone Else. It seems that if all the needs that exist in our Club are to be taken care of, then we must do them together.

Thanks, Western Amateur Radio Association, FEEDBACK

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October Swapmeet Notes

Frank Cartier, WA6RAY

Another tremendous turnout for the October Swapmeet. I expected a smaller turnout since that was the weekend of the CQ World Wide DX Phone Contest. Must have been all CW operators. Most of our 350 sellers spots were filled. This was also the first Swapmeet with the new sellers lot opening time of 0700. When I arrived at the parking lot

0645, the sellers lot was empty but there was a long line of sellers lined up from the entrance around back to Marine Ave. I request that sellers do not arrive in the vicinity of the TRW property until 0700 so that we do not disturb the nearby neighbors prior to that time. Thanks to all participants for observing our rules. We extended the closing time to 1130, however there are a few sellers who still do not wrap up their activities by this time. We will be enforcing this rule more rigorously for upcoming Swapmeets.

We have also been requested to comply with the state code which requires all sellers of equipment with serial numbers to fill out state form OCC1B56. Swapmeet volunteer supervisors will distribute and collect these forms at all subsequent Swapmeets. They are required by the State of California Department of Justice.

Thanks to volunteer supervisors Dale Mooney, WA6DLA and Jim Wike, W6GPE, for their excellent work this past month. The volunteers for November are:

Gary Cooper, WB6RLN

Mel Erb, K6GWC

Ron Phillips, K6MLL

We had a problem this month with people attempting to sell pay TV decoders (off the air, cable, etc.) We do not allow the sale of such equipment at our Swapmeet. People selling such devices run the risk of being asked to immediately leave the Swapmeet area. A note about "ON" TV. They have apparently gone out of business and their subscriber boxes are now available as surplus equipment for parts but are totally useless for TV channel reception. Again, no "decoder" devices for active pay TV services.

The winner of the TRW/ARC Swapmeet raffle is number

023. If you have this winning ticket, present it to Paul Herbert, K6GCR for your \$10.00 prize to be spent at a future Swapmeet. Any Club member wearing a Club hat, badge or showing me their Club membership card gets up to 2 tickets to the raffle at each Swapmeet.

73's and see you on 30 November at 0700!!!

General Meeting 29 Oct 1985

Paul Lukas, N6DMV

After TRW/ARC President Walt Pearson opened the meeting, Chris Wachs announced that 54 people have signed up for the TRW/ARC Annual Banquet. Besides several door prizes, a jackpot Kenwood TR-2600A HT will be given away. Chris (and many more of us) would like to see more Packet users in the Club. Presently Chris is the only TRW/ARC Packet user (soon to change). Paul Herbert reported that two plaques - showing our new QSL card - were presented to the Gamma Ray Observatory (GRU) management and NASA. John Orr, KX6A, expressed the need for Ham operators for the Hollywood Christmas Lane Parade. Operators are needed on Dec 1, from 1330 to 2230 local time. Requirements are a synthesized HT and signing a form. Interested persons must contact John before November 18 at (213) 378-5503 (home). "Welcome Aboard" to two new members: Don Martin, N6LLC and Steve Chapman, K6KTC. Guest speaker Dale Jensen gave a viewgraph presentation on the proposed TRW/ARC Emergency Communications Team (ECT). He covered all aspects of TRW/ARC involvement in emergency communications to facilitate TRW Security to handle emergency traffic. Thanks Dale, well done. Chris Wachs had a handout sheet on the TAPR TNC-2 which is available now. Activities Chairman Jim Wike gave away the following door prizes: 3 flashlights (extra bright ones), 4 repeater directories, 1 antenna handbook and a \$25.00 bonus from C&A Roberts (won by George Lee, W6IOW). The meeting was adjourned at 1259 local time.

SUCCESS -- When you make both ends meet and overlap.

Emergency Response Kit

Courtesy of Gene, KB6CMD

Communications Equipment (Minimum Required)

1. Handheld or Mobile Radio with Extra Fuses.
2. Extra Charged Battery Pack.
3. Cigarette Lighter or Vehicle Battery Adapter Cable.
4. Portable Antenna (Mag Mount or Portable Fixed).
5. Extra Coax and Adapters for Handheld or Mobile Radio.
6. List of Common or Local Repeater and Simplex Freqs.
7. Copy of License and I.D. Cards
8. Message Forms (25 ea.)
9. Maps of Your Response Area. (AAA or Thomas Bros.)
10. Paper and Pencil(s).

Suggested Personal Items

1. Flashlight, Spare Bulb and Batteries.
2. Pocket Knife.
3. First Aid Kit.
4. One Gallon of Water.
5. Sun Glasses
6. \$5.00 to \$10.00 in change and bills.
7. Toilet Articles (Toothbrush, Razor, Medications, etc.)
8. Insect Repellent
9. 25 feet of Nylon Cord
10. Jacket, Pants, Shirt, Socks (Wool or Cotton, No Polyester, Waterproof Jacket)
11. Gloves (good heavy duty type)
12. Shoes or Boots (Leather and Waterproof)
13. Small Tool Kit (Pliers, Adj. Wrench, Screwdriver, etc.)
14. Portable AM Radio with Fresh Spare Batteries
15. Sleeping Bag or Warm Blankets
16. Food for 3 days (72 hours)
First day's food should not require heating.
17. Mess Kit and Utensils (Knife, Fork, Spoon, Can Opener)
18. Fire Extinguisher (5 pound ABC Multipurpose)
19. Assorted Plastic Bags.
20. Auto Jumper Cables.
21. Fuel tank in vehicle never below half.
22. Watch or small clock (digital or analog)

Always use common sense. If you are well prepared for one emergency, you will be prepared for any emergency.

Wanted -- For Sale -- Freebies

For Sale: Icom O2AT Handheld. One year old, includes a BP7 battery pack, GPI power cable for cigarette lighter and BNC to PL239 adapter. Asking \$300.00 but will consider any reasonable offer. Call Jeff Stewart, N6JI, (213) 371-1977.

MIDDLE AGE -- When the narrow waist and the broad mind begin to change places.

K6ZTI Gets on Packet

Dale Jensen, K6ZTI

Yes, that's right, K6ZTI, Dale, has actually done it. He is on Packet Radio!! He was lucky when he went to Jun's to inquire about the AEA Terminal Node Controller (TNC) model PK-64 (otherwise known as the PAKRATT-64). The salesman said, "Hey, we have them in stock!" Dale responded, "Hey, I'll just have to take one!" They cost \$197.95 with Jun's discount and are a very nice package. Very simple too, with only two lights on the front panel: DCD and PPT. The PPT light tells you that you are sending out a packet, and the DCD light tells you that you are receiving a packet. It may not appear on your screen though, unless it is addressed to you and has been checked for correctness. Anyway, their instruction manual has a nice feature - a sort of impatient user's guide that gets you on the air right away without having to read the whole manual. All that had to be done was to connect a mike plug and a speaker plug to the furnished wires. They even supply an extra speaker jack on the TNC for your speaker so that you can hear the packets being received!

Well, in about a half an hour, Dale was ready to try receive mode. Guess what - it worked! It was only a minute to get into transmit mode and that worked also. They have some nifty software that does everything for you in set-up. Even tone calibration doesn't need test equipment! The frequency counter is right there on the CRT screen. The default parameters are pre-chosen so that you will get right on the air without having to change anything. Later, you will want to change some of these parameters to agree with standards that ought to be used in the SoCal area. So, Dale worked a lot of guys here in SoCal as well as some outlying areas (best 2 Meter DX was Las Vegas and San Louis Obispo) using digipeaters before he called Chris (WAZKDL) and gave him the news that now there are two hams in the Club who have Packet up and running.

Just goes to show you how easy it is to get on Packet. Suggestions for you Club members who want to get into Packet:

Step 1: Decide on your computer first. It must have either RS-232C interface or be able to accept a dedicated TNC (like the Commodore 64 and the PK-64 combination). It will operate as a dumb terminal.

Step 2: Decide on the TNC you will use. They all seem good and are priced around \$200.00.

Step 3: Get on 2 Meter Packet first. It will be easier to transition over to HF later with the 2 Meter experience behind you. Even a 2 Meter handheld will work fine. You talk through digipeaters most of the time anyway. Run low power, 10 watts is more than enough, but use an outdoor antenna if possible.

Step 4: You should try to have a disk drive and a printer if at all possible. You can get these accessories later.

Step 5: There is a Packet user's voice net on Monday nights at 8:00pm on 145.140 (-.600). Listen on the air to other Packet folks to see how they do it. Then, call yourself through a digipeater. Send test messages to yourself to see how you are doing. This will be exactly the same as if you were being received by someone else. Finally, you are ready to start "talking" to others. Good luck! Have fun!

First QSO

Leon Picon, WB3KMD

Not long ago, as I remember (it was only last December) The postman came a-knocking, knocking at my kitchen door. I had seen him near my thicket. "Surely," I thought, "he'll have my ticket..." And I shuddered as I hastened to greet him at the door "or will this day, like many others that have gone before bring only bills - - and NOTHING MORE?" Aloud I shouted: "How can this be? I've waited weeks. How can they miss me? Pray, search your bag. Another letter there must be. I fathom not what the delay is. All my anxious soul can pray is: There is a certain notice in your bag for me -- Yet another letter that could fill my heart with glee.." Asked the postman, "From the FCC?" As I watched the postman grinning like a cherub who'd been sinning With that ever present, winning smile of his, The wind blew hard; the door was creaking; but o'er the din I heard him speaking: "I think I know just what you're seeking. Yes..." quoth the postman, "...here it is!" My postman seemed to caper, and not unlike a dwindling taper Disappeared. He left me with a paper, with my call sign from the FCC! I seized that paper and a tack, then scurried to my new built shack And panting, tuned my rig. I grabbed my key. I'd find some pleading ham's CQ - whoever that might be - And have him judge my RST. The 15 Meter band was humming, but my CQ was yet forthcoming And the very loudest tapping was from my banging knees. Outside the shack, the snow was glist'ning. The world seemed bright. I kept on listening, Impressed and jealous of that apparent ease Of other fellow Novices working at their keys But all their letters seemed to ME - - like C's. Then I did what other men would, tuned more sharply on my Kenwood And held my breath 'til I was almost blue. I thought my pounding heart was snapping, but then my fist began its tapping As if I knew just what a ham should do I batted out my very first CQ. Upon my brow the sweat was pouring. My XYL was near, adoring The unprecedented courage I now began to show. An answer came! No time for rueing what I'd done or would be doing. How pure my letters? I did not care or know. But on my wall today a QSL will clearly show Beyond a doubt -- in fact -- I'd had a QSO.

Thanks, Collector and Emitter

TRW/ARC High-Tech Group

Chris Wachs, WAZKDL

Do you know what a TNC is?? Mode L?? RF modem designs?? Do you want to be out on the forefront of what is happening in Amateur Radio? If you answered yes to any of those questions then you want to be in the new TRW/ARC High-Tech Group. I am thinking of starting up this group and having a meeting once a month starting in the near future. This group will be a lot of work - but enjoyable work because we will learn by doing! Some of the projects that I have in mind are LA's second Packet Radio Gateway Station and testing the Packet Satellite modem. But the group will decide, so come with ideas because there is a lot out there that is beginning to happen that the High-Tech Group can get involved in. If you are interested or want more info, please give me a call at (213) 316-9243 (work) or (213) 371-4705 (home). I look forward to hearing from you.